

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF THE CLAIMS:

Claims 1-10 (Cancelled)

11. (Original) An imaging system comprising:
an imaging element provided with a color filter;
a first semiconductor integrated circuit device
including:
an amplifying circuit for amplifying an analog color
video signal outputted from said imaging element, an AD
conversion circuit for converting the amplified analog
color video signal to a digital signal, a differential
circuit for obtaining a difference between codes of
adjacent pixels of the digital signal in regard to a same
color after a conversion operation of the AD conversion
circuit and before outputting to outside of the first
semiconductor integrated circuit device, and a first code
conversion circuit for code conversion of an output of the
differential circuit;

and a second semiconductor integrated circuit device including a second code conversion circuit for converting an output from the first semiconductor integrated circuit device.

12. (Original) An imaging system according to claim 11,

wherein the first code conversion circuit is a binary to gray code conversion circuit for converting a binary code to a gray code;

and the second code conversion circuit is a gray to binary code conversion circuit for converting the gray code to the binary code.

13. (Original) An imaging system according to claim 11,

wherein said first code conversion circuit comprises a circuit for adding or subtracting a fixed value to or from an input code;

and said second code conversion circuit comprises a circuit for subtracting or adding a fixed value from or to an input code.

14. (Original) An imaging system according to claim 11,

wherein said differential circuit comprises a delay circuit for delaying an output code of said AD conversion circuit and a subtraction circuit for obtaining a difference between the output code delayed by the delay circuit and an input code,

and said delay circuit is constructed to vary a delay time depending on a color arrangement of an input video signal.

15. (Original) An imaging system according to claim 11,

wherein the imaging system includes a storage circuit to store digital video data,

the second semiconductor integrated circuit device is provided with a data compression circuit for compressing an output converted by said second code conversion circuit and a data expanding circuit for expanding the output compressed by the data compression circuit,

and codes compressed by the data compression circuit are stored in the storage circuit.

16. (Original) An imaging system according to claim 11,

wherein the second semiconductor integrated circuit has an image processor for processing codes converted by the second conversion circuit.

17. (Original) An imaging system comprising:
an imaging element provided with a color filter;
a first semiconductor integrated circuit device including a correlation double sampling circuit for sampling an analog color video signal output from the imaging element, an amplifying circuit for amplifying the analog color video signal output from the correlation double sampling circuit, an AD conversion circuit for converting the analog color video signal amplified by the amplifying circuit to a digital signal, a differential circuit for obtaining a difference between codes of adjacent pixels of the digital data in regard to a same color, and a code conversion circuit for code conversion of an output of said differential circuit;

and a second semiconductor integrated circuit device having a code converter for converting an output from the first semiconductor integrated circuit device and an image

processor for processing codes converted by the code converter.

18. (Original) An imaging system according to claim 17,

wherein the code conversion circuit is a binary to gray code conversion circuit for converting a binary code to a gray code,

and the code converter is a gray to binary code conversion circuit for converting the gray code to the binary code.

19. (Original) An imaging system according to claim 17,

wherein the code conversion circuit comprises a circuit for adding or subtracting a fixed value to or from an input code,

and the code converter comprises a circuit for subtracting or adding a fixed value from or to an input code.

20. (Original) An imaging system according to claim 17,

wherein said differential circuit comprises a delay circuit for delaying an output code of said AD conversion circuit and a subtraction circuit for obtaining a difference between the output code delayed by the delay circuit and an input code,

and said delay circuit is constructed to vary a delay time depending on a color arrangement of an input video signal.

21. (Original) An imaging system according to claim 17,

wherein the imaging system includes a storage circuit to store a digital video data,

the second semiconductor integrated circuit device is provided with a data compression circuit for compressing an output converted by the code converter, and a data expanding circuit for expanding the output compressed by the data compression circuit,

and codes compressed by said data compression circuit are stored in the storage circuit.

22. (Original) An imaging system according to claim 17,

wherein a sampling period of said correlation double sampling circuit corresponds to a color arrangement of the analog color video signal output from the image element.

23. (Original) An imaging system according to claim 22,

wherein said differential circuit comprises a circuit to set sampling time of said correlation double sampling circuit.

24. (Original) An imaging system according to claim 23,

wherein the circuit comprises a register for setting the time.

25. (Original) An imaging system according to claim 23,

wherein the time corresponds to the color filter.

26. (Original) An imaging system comprising;
an imaging element provided with a color filter;
a first semiconductor integrated circuit device
including a correlation double sampling circuit for
sampling an analog color video signal output from the
imaging element, an AD conversion circuit for converting
the analog color video signal output from the correlation
double sampling circuit to a digital signal, a differential
circuit for obtaining a difference between codes of
adjacent pixels of the digital signal in regard to a same
color, and a code conversion circuit for code conversion of
an output of said differential circuit;

and a second semiconductor integrated circuit device
having a code converter for converting an output from the
first semiconductor integrated circuit device.

27. (Original) An imaging system according to claim
26,

wherein a sampling period of said correlation double
sampling circuit corresponds to a color arrangement of the
analog color video signal output from the image element.

28. (Original) An imaging system according to claim 27,

wherein said differential circuit comprises a circuit to set sampling time of said correlation double sampling circuit.

29. (Original) An imaging system according to claim 28,

wherein the circuit comprises a register for setting the time.

30. (Original) An imaging system according to claim 27,

wherein the time corresponds to the color filter.